REMARKS/ARGUMENTS

Favorable consideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-6, 10-12, 16, 20 and 22-46 are presently pending in this application, Claims 7-9, 13-15, 17-19 and 21 having been canceled, Claims 1-6, 10, 16 and 20 having been amended and Claims 22-46 having been newly added by the present amendment.

In the outstanding Office Action, the abstract of the disclosure was objected to for informalities; Claims 7, 8, 13 and 14 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 0 361 883 (hereinafter "EP '883"); Claims 1-3, 9-12 and 15-21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Naruse et al. (U.S. Patent 5,914,187) in view of EP '883; and Claims 4-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Naruse et al. in view of EP '883.

In response to the objection to the abstract of the disclosure, submitted herewith is a new abstract which is believed to correct the noted informalities. No further objection on that basis is anticipated.

Claims 1-6, 10, 16, 20 have been amended, and Claims 22-46 have been newly added herein. These amendments and additions in the claims are believed to find clear support in the specification, claims and drawings as originally filed, and no new matter is believed to be added thereby. If, however, the Examiner disagrees, the Examiner is invited to telephone the undersigned who will be happy to work in a joint effort to derive mutually satisfactory claim language.

Before addressing the outstanding rejections based on the cited references, a brief review of Claims 1, 2 and 4 as currently amended is believed to be helpful.

Claim 1 is directed to a honeycomb filter for purifying exhaust gases and recites, *inter alia*, "a plurality of columnar porous ceramic members each having a partition wall and a

plurality of through holes ..., said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and an adhesive layer combing said columnar porous ceramic members with one another, wherein said adhesive layer has a thermal expansion coefficient α_L, said columnar porous ceramic members have a thermal expansion coefficient α_F, and said thermal expansion coefficient α_L of said adhesive layer and said thermal expansion coefficient α_F of said columnar porous ceramic members satisfy a relationship, $0.01 < |\alpha_L - \alpha_F|/\alpha_F < 1.0$."

Claim 2 is directed to a honeycomb filter for purifying exhaust gases and recites, *inter alia*, "a ceramic bock comprising at least one columnar porous ceramic member, said columnar porous ceramic member having a partition wall and a plurality of through holes ..., said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and a coating material layer formed on a circumferential face of said ceramic block, wherein said coating material layer has a thermal expansion coefficient α_M, said columnar porous ceramic member has a thermal expansion coefficient α_F, and said thermal expansion coefficient α_M of said coating material layer and said thermal expansion coefficient α_F of said columnar porous ceramic member satisfy a relationship, $0.01 < |\alpha_M - \alpha_F|/\alpha_F < 1.0$."

Claim 4 is directed to a honeycomb filter for purifying exhaust gases and recites, *inter alia*, "a plurality of columnar porous ceramic members each having a partition wall and a plurality of through holes ..., said partition wall separating said through holes and configured to filter particulates in an exhaust gas, said through holes of each of said columnar porous ceramic members including ones sealed at an inlet side of said columnar porous ceramic members and ones sealed at an outlet side of said columnar porous ceramic members such that the exhaust gas enters from the inlet side, passes through the partition wall and flows out from the outlet side; and an adhesive layer combing said columnar porous ceramic members with one another, wherein the adhesive layer has a thermal capacity per unit volume that is lower than a thermal capacity per unit volume of the porous ceramic members."

By providing such a structure, the porous ceramic member better withstands a regenerating process of high-temperature and burning of unevenly accumulated particles in the filter, thereby deterring cracking in the porous ceramic filter.

The outstanding Office Action states that "[i]t would have been obvious ... to modify the teachings of Naruse et al with the teachings of Ito et al to prevent stress concentration upon the bonded portions and for thermal shock resistance ...." Applicants respectfully traverse this obviousness rejections based on Naruse et al. and EP '883 ("Ito et al.") as follows.

Ito et al. is directed to a heat exchanger, not a filter, and shows unsealed flow channels for air to simply flow through without being forced to pass through the walls of the heat exchanger matrixes. Moreover, it is believed that the matrixes of a heat exchanger would require a high density to achieve large thermal capacity for heat exchange. As such, it is believed that the matrixes of a heat exchanger would not be *porous* ceramic whose thermal capacity is small and whose wall is capable of filtering particles in an exhaust gas. Thus, the bonding material in EP '883 is not believed to have a thermal capacity per unit volume that is

lower than that of the matrixes of a heat exchanger. Based on the foregoing discussions, it is respectfully submitted that modification based on the teachings of Naruse et al. and EP '883 is believed to lack a proper motivation and likelihood of success and that the modification proposed in the Office Action is believed to be rather a product of hindsight guided by Applicants' disclosure. Therefore, Applicants respectfully request that the outstanding obviousness rejections based on Naruse et al. and EP '883 be withdrawn.

Regarding the subject matter recited in Claim 2, it is respectfully submitted that neither Naruse et al. nor EP '883 teaches or suggest that "said coating material layer has a thermal expansion coefficient α_M, said columnar porous ceramic member has a thermal expansion coefficient α_F, and said thermal expansion coefficient α_M of said coating material layer and said thermal expansion coefficient α_F of said columnar porous ceramic member satisfy a relationship, $0.01 < |\alpha_M - \alpha_F|/\alpha_F < 1.0$" as recited in Claim 2. As shown in Exhibit A, the rate of push-out strength for the range of $0.01 < |\alpha_M - \alpha_F|/\alpha_F < 1.0$ does not drop significantly after the particulate collection test. Thus, the porous ceramic member and coating member are prevented from cracking, and the filter is not reduced in its strength and does not leak an exhaust gas. Thus, the subject matter recited in Claim 2 is believed to be distinguishable over Naruse et al. and EP '883, and is not believed to be rendered obvious from Naruse et al. and EP '883.

Likewise, Claims 3, 10 and 16 are believed to include subject matter substantially similar to what is recited in Claim 1, 2 or 4 to the extent discussed above. Thus, Claims 3, 10 and 16 are also believed to be distinguishable from Naruse et al. and EP '883.

For the foregoing reasons, Claims 1-4, 10 and 16 are believed to be allowable. Furthermore, since Claims 5-6, 11-15, 20 and 22-46 depend directly or indirectly from one of Claims 1-4, 10 and 16, substantially the same arguments set forth above also apply to these

dependent claims. Hence, Claims 5-6, 11-15, 20 and 22-46 are believed to be allowable as well.

Applicants also wish to point out that Claim 22 recites that "said adhesive layer comprises an adhesive comprising a material that is capable of forming independent pores;" Claim 23 recites that "said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons;" Claim 24 recites that "said coating material layer comprises a coating material comprising a material that is capable of forming independent pores;" and Claim 25 recites that "said material that is capable of forming independent pores comprises at least one material selected from the group consisting of a foaming agent, inorganic balloons and organic balloons." By adding such material to the adhesive and coating layers, porosity is increased in the adhesive and coating layers and thus their thermal capacity is effectively lowered. Hence, these and similar dependent claims are further distinguishable over Naruse et al. and EP '883.

In view of the amendments and discussions presented above, Applicants respectfully submit that the present application is in condition for allowance, and an early action favorable to that effect is earnestly solicited.

Respectfully submitted,

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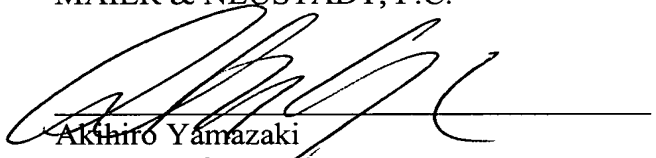

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